

The

March, 1964

Florida Architect

OFFICIAL JOURNAL of the FLORIDA ASSOCIATION OF ARCHITECTS of the AMERICAN INSTITUTE OF ARCHITECTS



Current Highlights...

- **TALK OF AN ALL-OUT BUSINESS BOOM THIS YEAR IS CROPPING UP** these days in Washington. Some forecasters expect even greater gains than those being predicted by the President's economic advisers. They see big jumps in jobs, sales, and profits, as well as shortages and bottlenecks. They stress the fact that business activity is already rising smartly though the impact of the tax cut still hasn't even started to show up. Optimism is spreading. It is infectious . . . contagious — the kind of psychology that goes with a boom.

Note that this is still a minority view. Official forecasts see only a brisk upturn — with total output to rise nearly 7% as against 1963's 5%-plus. The economy would still have a little slack. A boom, though, would push growth above 8%.

Some of the boom talk is political propaganda — normal in an election year. But there's more than electioneering to it. The all-out optimists expect the tax cut to spark a chain reaction of consumer spending, inventory-building and plant expansion. Meanwhile, autos and housing would stay high.

- **THE TAX CUT AND THE NEW BUDGET MAY BE MORE STIMULATING** to business than originally planned. They'll have maximum impact this year, not 1965, despite the President's economy drive. Economy and stimulation in the same period sounds contradictory; but it's a matter of timing. Remember — the new Budget runs July 1964 to June 1965; U.S. spending will rise through December — then show the cuts. Meanwhile, tax withholding is falling more than first set — to 14% right now (from 18%). It was to go to 15% now and 14% in 1965.

How real are the President's spending cuts? A lot more so than some of the cynical talk going around. Some slashes will never be made, because he has estimated too high on the amount of government-owned mortgages that will be sold or has counted too much on Congress changing the farm laws. On the other hand, Congress may not vote all Johnson asked for. Net — substantial reductions though less than he is claiming.

- **WASHINGTON IS UNEASY ABOUT THE POSSIBILITY OF INFLATION** later this year — considerably more so than officials care to admit, except in private. Few economists believe that a boom-demand for goods will strain supplies. Most feel present idle men and machines will serve to prevent bottlenecks. But they expect that labor and business may try to capitalize on the increase in everyone's expectation to make a big push for higher prices and wages.

The President will act to stop a wage-price spiral. He will put pressure on unions to hold demands to productivity gains. And he'll discourage "unwarranted" increases in prices — but not by clobbering any industry such as steel two years ago. Officials will be scanning the indexes, ready to clamp down.

- **THE FEDERAL RESERVE WILL CURB CREDIT FAST** if prices start to zoom. This agency, which is responsible for controlling our money supply, would deliberately try to slow down the tempo of the business expansion — as one way to check inflation and shrinkage in the value of the dollar. This would not sit well with the President who wants nothing to interfere with good business on Election Day. But he would accept tighter money as necessary.

- **INTEREST RATES WILL NOT RISE MUCH**, if prices hold relatively stable and if the balance of payments continues to improve as expected. This is now the view of top Treasury experts. It reflects a switch in thinking from late 1963. The demand for credit is still expected to rise with the tempo of business — except perhaps for mortgage credit where the 1964 gains may not match last year's. But the supply of savings will be up, too. And it may be year-end before business steps up plant expansion and its need for cash.

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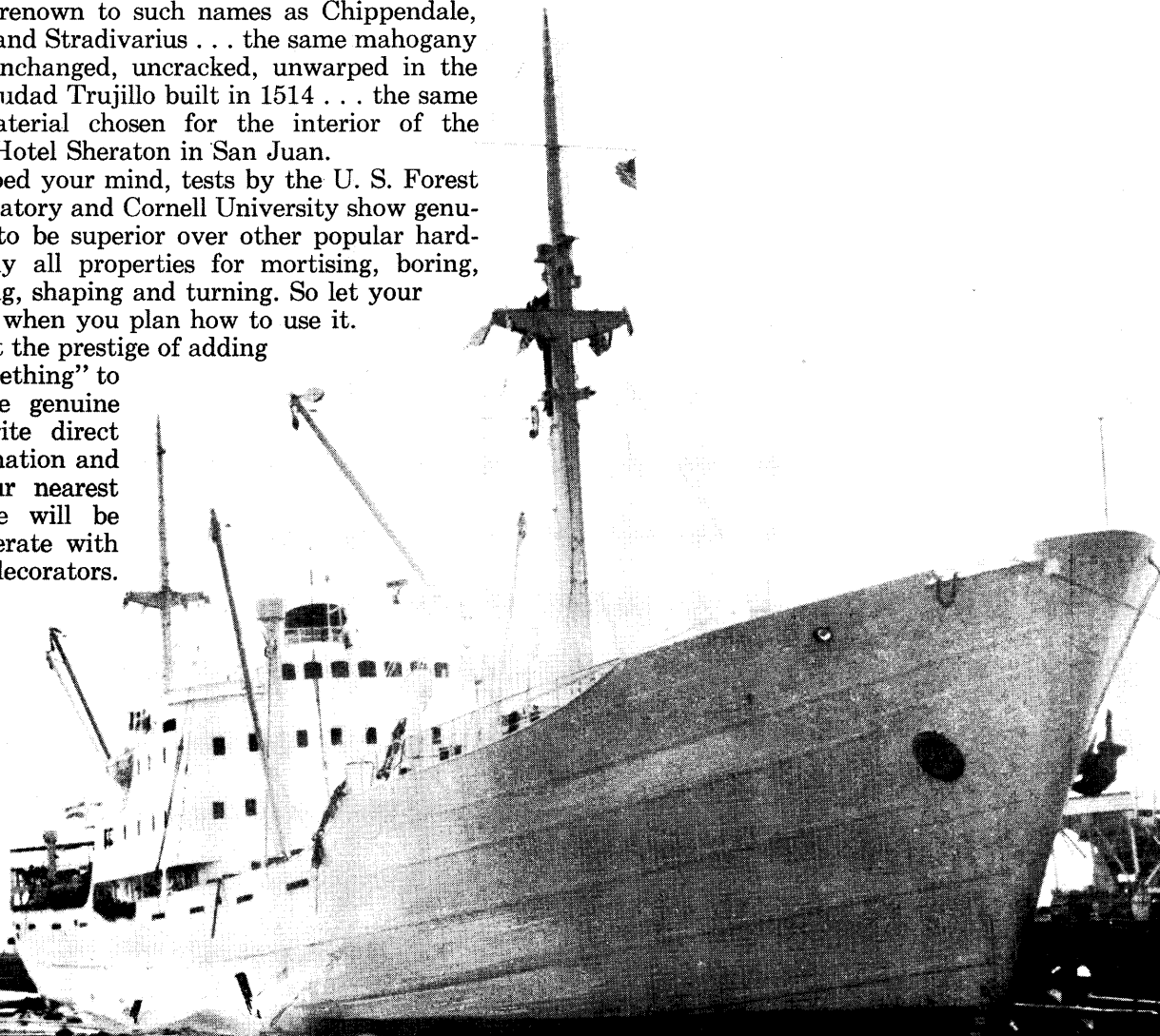
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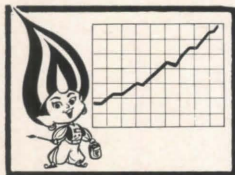
WEIS-FRICKER MAHOGANY

PENSACOLA, FLORIDA

GASGRAM



NATURAL GAS
IN THE HEADLINES



SUCCESS STORY: NATURAL GAS AIR CONDITIONING ZOOMING! Preliminary 1963 reports from Florida Natural Gas Association members indicate a 421% increase in air conditioning tonnage over past three years. Florida thus outstrips national figures which show 400% increase since 1957. Florida distribution systems credit special year-round rates, low operating and maintenance costs for enabling them to show bigger increase over shorter period of time. Complete survey results will appear in next issue.

GOLD COAST USE OF NATURAL GAS "SPECTACULARS" GROWING. Peoples Gas System customers in Miami Beach-Sunny Isles area are using novel natural gas effects to outshine competition: Plush Doral Beach Hotel features 14 ornamental gaslights in their Spanish Garden (in addition to three all-gas kitchens to supply their gourmet cuisine.) Fabulous Castaways, one of America's top motels, awes guests with torch atop their king-size waterfall. New oceanfront Hawaiian Isle Motel commands attention with luau torches and twin underwater gas flames. Kitchen is all gas, and laundry features commercial dryer.

BUSINESS AIR CONDITIONING CUSTOMER IS "LIVE" RESIDENTIAL PROSPECT. Tuppen's Boats of Lake Worth removed one-ton electric air conditioner, had Florida Public Utilities install a 5-ton engine-driven natural gas unit to cool a much larger area. Says owner Tuppen, "We are more than pleased. Hurry up and extend your mains so we can have gas air conditioning at home, too."

SAFETY NOTE: Guess who installed natural gas stand-by emergency generating equipment in case of electric power failure — the Miami Beach Fire Department.



"CALL THE POWER COMPANY TO COME CUT THEIR LINES." That was the word when City Gas Company completed its first "total energy" installation for Miami's Polar Palace Ice Skating Rink. Fueling a 125KW Caterpillar internal combustion engine-generator set, natural gas not only furnished air conditioning, but also makes ice for the rink, electricity for lights and miscellaneous appliances. Direct uses of natural gas include cooking and water heating.

PUTTING ALL THEIR BREAD IN ONE BASKET Increased efficiency resulted for Bell Bakeries of Fort Pierce when that City's Natural Gas Utilities Department converted various fuel oil and LP gas operations to natural gas. Now the one fuel fires both ovens and boiler — bakes the bread, heats the water, heats the building, provides steam . . . and brings smiles to the accountant's office.

THEY LIKED "COOKING WITH GAS" SO-O-O St. Petersburg's Mound Park City Hospital started with an all-gas kitchen . . . liked it so well they added a 1,500,000 B.T.U. natural gas dryer in their laundry . . . liked **that** so well they had the City's Gas Division convert their three 200-H.P. boilers from Bunker C fuel oil to natural gas.

COLD WEATHER PROBLEMS JUST AREN'T. Despite record cold snaps which caused electric power overloads and interruptions (particularly in South Florida), no failure of natural gas to meet peak demands has been recorded. People Gas System, with the state's largest customer list, topped all previous sendouts with a record high of 393,710 therms on Jan. 14, 1964, an increase of 21,824 therms over last winter's high . . . yet logged not a single low pressure complaint.

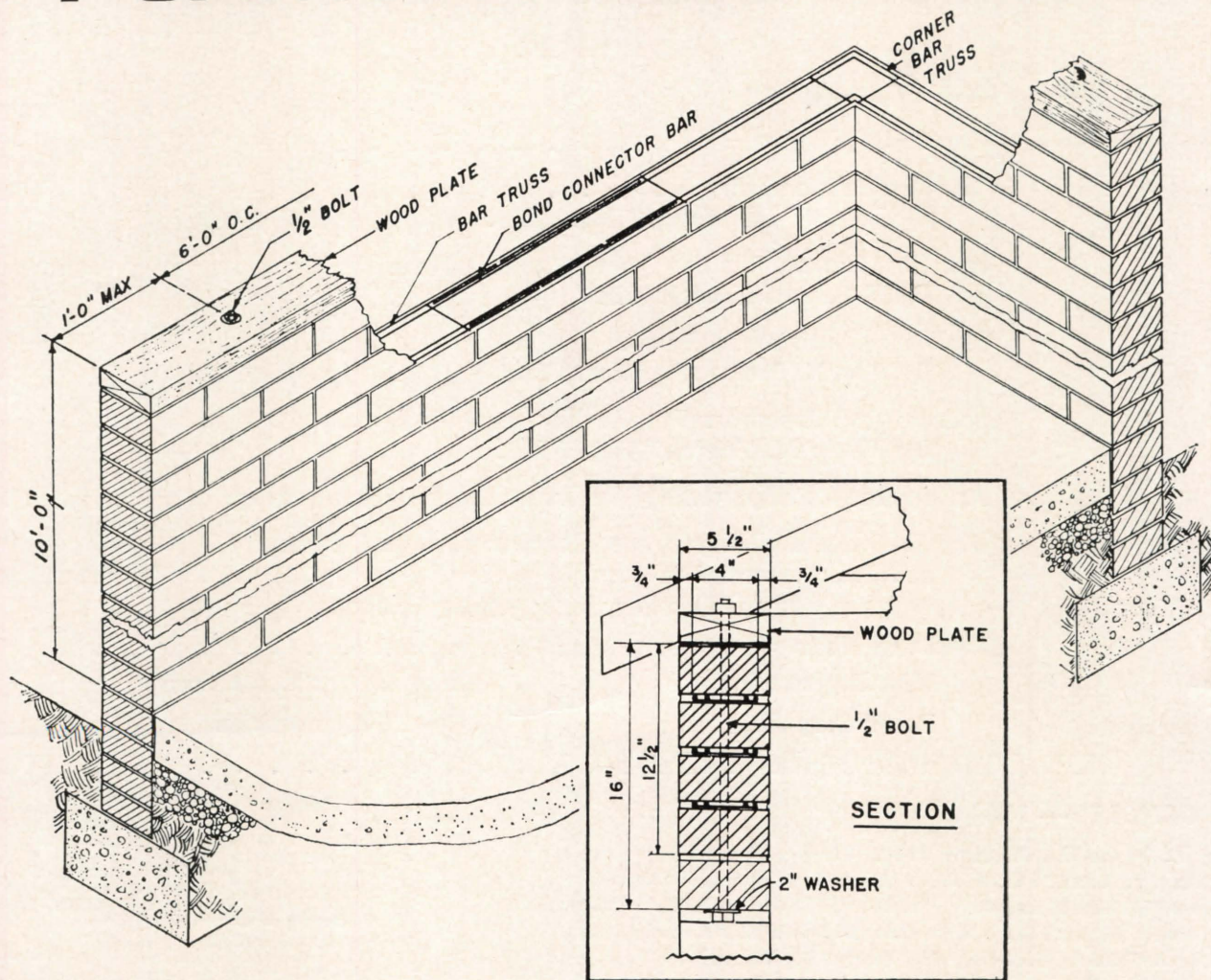


BIG PRINTER IS BIG USER OF NATURAL GAS. High-speed printing presses, which print four colors at once, would produce mostly a massive mess of smears if natural gas didn't dry the ink the instant it touches the paper. An idea of the scope of this operation: Weiss Lithograph of Miami, one of the country's top producers of magazines (such as TV Guide) is also one of the top customers of Florida Gas Company's Miami Division.

NATURAL GAS TO NEW SMYRNA BEACH — ELECTRIC PLANT IS MAJOR USER. Work is well along on the 14-mile transmission line extending natural gas service from Daytona Beach to New Smyrna Beach. Delivery of gas to South Florida Gas Company's brand new distribution system in southern Volusia County is scheduled to begin as this issue of Gasgrams goes to press. One major customer who will cut costs with natural gas: New Smyrna Beach's new municipal electric plant.

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The Florida Architect

OFFICIAL JOURNAL OF THE FLORIDA ASSOCIATION OF ARCHITECTS

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THE COVER

Showing the rear elevation of the Clearwater Federal Savings and Loan Association. The parking facilities are at the rear of the building, so that the rear elevation in effect, is as important as the front elevation. More illustrations of this building appear on pages 18 through 20.

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NUMBER 3 1964

THE FLORIDA ARCHITECT

A
NEW
HARRIS
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SERVICE!



Harris Paint Company is pleased to introduce two new members of the Harris Service Team:

MRS. ELIZABETH KAGEY and MR. WALTER O. THOMAS

Mrs. Kagey serves as interior decorator and color consultant on the Harris Paint Staff. Her excellent background and extensive experience qualify her completely in interior-exterior color planning. She attended the New York School of Interior Design and has had extensive experience in Florida in selecting colors for our climate—especially in the public school field. Mrs. Kagey is available as a consultant to architects, builders, painting contractors and home owners to assist in selecting furnishings, appointments and colors for offices, plants, schools and homes.

Mr. Thomas has been appointed as a technical paint

consultant to architects. He has over 20 years of experience in this field and can be of great assistance in writing paint specifications for various designs as well as recommending architectural finishes or chemical resistant coatings for specific needs. In addition he has had extensive experience in developing safety color codes for manufacturing plants throughout the southeast.

The experience and service of both Mrs. Kagey and Mr. Thomas is provided by Harris Paint Company at no additional cost to the client. We invite your use of this new service.

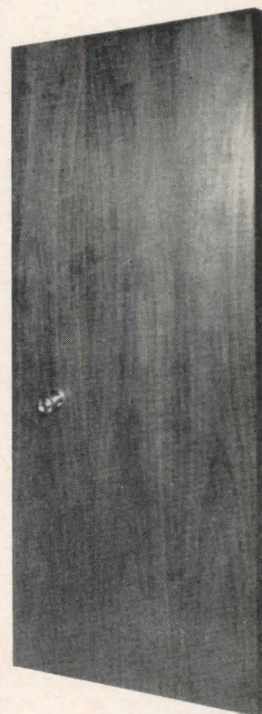
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MARCH, 1964

Edsonite

At the MIMOSA
APARTMENTS
Miami Beach, Florida



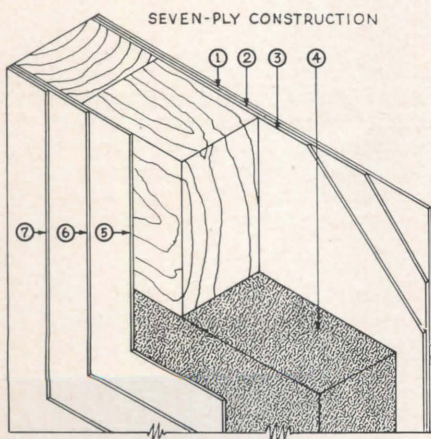
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THE FLORIDA ARCHITECT

THE FLORIDA LIEN LAW

By

ROBERT H. LEVISON, AIA

FAA Regional Director

HENRY T. TRAWICK, Attorney

Kirk, Pinkerton, Sparrow, Trawick & McClelland
Sarasota, Florida

This article is based on the experience of one architectural firm who has found this format to be successful in handling the specifications situation. The intent of this article is to present a workable plan and a guide for consideration by other firms. Each individual should certainly adopt a format to his own liking.

The article is divided into three sections, all of which are for the use of the practitioner, **Architect's Office Procedure, Summary of Provisions and Suggested Supplementary General Conditions.**

ARCHITECT'S OFFICE PROCEDURE

1. Notify Owner he is required to record Notice of Commencement of work in Clerk of Court's office and post a copy of Notice on the site, before work is started. If work is not started in 30 days, another Notice must be recorded and posted. Notice shall show all information required by 84.131-(1).
2. Notify Owner he will receive Notices of Lien from all material suppliers and sub-contractors. Notices of Lien will be in the form shown in 84.061-(2) (c). (*Refer to suggested form on this page*).
3. The Owner may appoint the architect to file Notice of Commencement and to receive Notices of Lien, or he may act for himself, or he may designate anyone else.
4. Notify the Owner not to make any payments before Notice of Commencement is recorded.
5. Advise Owner payments to Contractor may be made at times and with percentages retained as agreed upon by the parties subject to obtaining partial releases on progress payments. When final payment is due, it, or 10 per cent of the contract price, whichever is greater, shall be retained until the Contractor furnishes affidavit that all lienors have been paid in full.
6. Advise Owner that a payment bond in statutory form furnished by the Contractor and a Surety Insurer in amount not less than

the total amount of the contract price, will exempt the Owner from the requirements of the Lien Law.

7. The Architect, designated by the Owner to do so, shall:
 - a. Record Notices of Commencement as many times as required before work is started.
 - b. Receive Notices of Lien from all material suppliers and sub-contractors either directly or through the Owner.
 - c. When partial payments are due under the terms of the contract between the Owner and the Contractor, the architect shall require the Contractor to submit waivers of lien, releases of lien, or partial releases of liens, an affidavit that all lienors have been paid in full or giving names and amounts of lienors that have

not been paid in full. He shall not authorize payment by the Owner until liens are satisfied.

- d. When final payment is due, he shall authorize withholding the entire amount of the final payment or of 10 per cent of the contract price, whichever is greater, until all liens have been satisfied and final affidavit is furnished.

SUMMARY OF PROVISIONS

1. Record a Notice of Commencement in Clerk of Court's office before 84.131 improvement is begun.
2. Post certified copy of above notice at the site giving:
 - a. Description of property to be improved. (legal description)
 - b. General description of improvement.

(Continued on Page 8)

NOTICE TO OWNER

To: _____
(owner's name and address)
The undersigned hereby informs you that he has furnished or is furnishing services or materials as follows: _____
_____ for the
(general description of services or materials)
improvements of the real property identified as _____
_____ under an order given by
(property description)
_____ Florida law prescribes the
serving of this notice and restricts your right to make payments under
your contract in accordance with section 84.061, Florida Statutes.
Copies to: _____
(Lienor's signature and address)

Lien Law . . .

(Continued from Page 7)

- c. Name and address of Owner or name and address of title holder if other than Owner.
 - d. Name and address of Contractor.
 - e. Name and address of surety company issuing payment bond and amount of bond, if any.
 - f. Name and address of Owner's agent.
3. If the improvement is not commenced within 30 days after Notice of Commencement is recorded, the notice becomes void and another notice must be recorded before improvement is begun.
 4. The Contractor who is under contract to the Owner has a lien on the improved property provided his claim of lien is recorded in the Clerk's office. 84.051.
 5. 84.061 Sub-contractors and material suppliers have liens on the improved property on which they have furnished materials, labor or services, but they are required to serve the Owner with notice of lien before, or not later than, 45 days after commencing to furnish materials or services. Owner must expect to receive such notices from the contractor, sub-contractors, material suppliers, and others who contribute to the improvement. Claims of lien must be recorded in the office of the Clerk of Court. The lienor shall also mail a copy of the notice to the Owner's agent if the Owner has appointed one.
 6. Lienor's notices to Owner shall show:
 - a. Owner's name and address.
 - b. Materials and/or services furnished.
 - c. Property description.
 - d. Source of order for materials and services.
 7. The Owner shall make no payments on a contract before recording the Notice of Commencement.
 8. 84.061-3-c-1 The Owner shall pay payments due the Contractor as they come due, except the final payment, but before making payment to the Contractor the Owner may require him to furnish an affidavit stating that all lienors have been paid in full or amounts owed *each if they have not been*

paid in full. Acceptance of the Contractor's affidavit does not relieve the Owner of his obligation to lienors from whom he has received notice. The Owner may pay such outstanding bills direct to the lienors if the balance owed on the contract is sufficient to cover them and he shall deduct such payments from the balance due the Contractor.

9. When the last payment becomes due, the Owner shall retain it or 10% of the contract price, whichever is greater, until the Contractor has given the Owner his affidavit that all lienors have been paid in full or amounts owed each if they have not been paid in full. He shall continue to withhold payment until the Contractor furnishes an affidavit that all lienors have been paid in full. If the Owner fails to withhold payment, the improved property will be subject to all liens of lienors of which the Owner has notice.
10. Claims of lien recorded by lienors in the Clerk's office shall show all of the information required by 84.081. The claim of lien may be recorded at any time during the progress of the work but not more than 90 days after final furnishing of services or materials.
11. 84.201 Lienors may waive or release liens or issue partial release of liens at any time.
12. 84.211 Liens may be discharged as described in this paragraph.
13. 84.231 A payment bond in statutory form furnished by the Contractor and a Surety Insurer in amount not less than the total amount of the contract price before beginning construction will exempt the Owner from the requirements of the lien law.

PAYMENTS TO CONTRACTOR

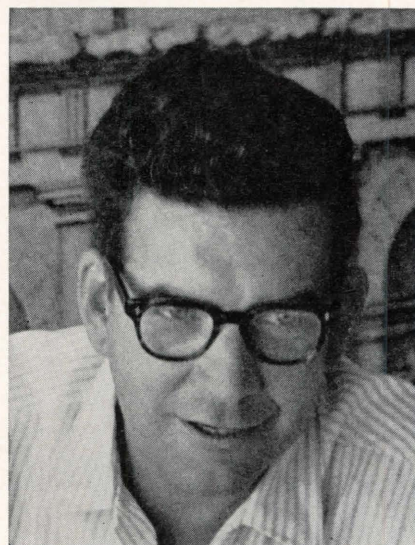
1. Payments to the Contractor will be made as provided in Chapter 84, Florida Statutes as amended.
2. Monthly payments of ____ per cent of the cost of labor, materials and services used in the construction of the building, and of materials suitably stored on the premises or in bonded warehouses off the premises, will be made by the Owner on the architect's certificate upon request for payment by

the Contractor. Requests for payment shall be accompanied by estimated specified in Paragraph ____, and properly executed partial releases of liens by all lienors who have served notice on the Owner.

3. Final payment will be made 30 days after acceptance of the building by the architect and the Owner upon request by the Contractor and on condition that:
 - a. The Contractor furnish properly executed releases of liens from all lienors who have served notice on the Owner.
 - b. The Contractor furnish his affidavit that all lienors have been paid in full and/or the names and amounts due lienors who have not been paid in full. In event not all lienors have been paid in full, the Owner shall retain a sufficient sum to pay lienors in full, and at his option may make direct payment to lienors to obtain complete releases of liens.
 - c. The Contractor furnish a Certificate of Occupancy if such is issued by the local building official.
 - d. The Contractor furnish As-Built drawings and maintenance and operating instructions as required by certain divisions of these specifications.
 - e. The Contractor furnish guarantees signed by sub-contractors and the Contractor for certain portions of the work specified herein.
 - f. The Contractor furnish a guarantee signed by the Contractor, in form acceptable to architect and the Owner, agreeing to repair or replace as decided by the architect, all work and materials that prove defective, within one year from date of acceptance of the building.
4. In event the Contractor furnishes a payment bond in statutory form in amount not less than the total contract price, at the time of execution of the contract and as required by the Owner, exempting the Owner from the requirements of the Mechanics' Lien Law, Florida Statutes, all monthly payments and final payment will be made to the Contractor in full upon request by the Contractor and the architect's certificate of approval.

Architect Starnes Elected County Commissioner

By H. SAMUEL KRUSE, FAIA



Florida Architects must praise the Florida South Chapter of AIA for its undying efforts in the campaign to elect Earl M. Starnes to the Dade County Commission. The image of the Architect has been broadened by the election of Starnes. — Editor.

On February 11, 1964, Architect Earl M. Starnes, a political unknown before the election, piled up the largest majority to overwhelm incumbent Hughlan Long and become Dade County's Commissioner from District 7.

Starnes, a Director of the Board of The Florida Association of Architects and past-president of the Florida South Chapter of the American Institute of Architects, whose most noteworthy office before the election was as a member of the City of Miami Minimum Housing Board, won his job under a new system that was approved in a charter amendment election last November. In the new system eight commissioners from Districts and a Mayor for the Dade County Commission are all elected countywide.

Starnes credited his win to his strong pro-Metro campaign and promises to fight for better zoning, stronger stand against zoning variances that hurt the county, and better long-range planning for Dade.

His campaign emphasized his training and skills as an architect fitted him for putting plans for Dade County into action and his faith in metropolitan government as the logical vehicle for the solution of regional problems. His candidacy was indorsed by the seven leading newspapers of the county.

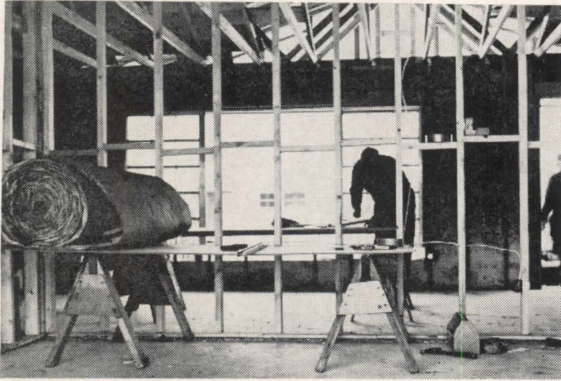
Members of the Florida South Chapter of the American Institute of Architects are exceptionally jubilant. For the last seven years they have supported metropolitan government

against detractors and obstructionists, only to have the architect's point of view ignored when there arose community development issues of especial interest to architects. Now the architect's special views will sit on the Commission and will be expressed.

Starnes takes his place on a strong pro-Metro Commission, for the most part stripped of its close ties with the City halls that have consistently thwarted the exercise of metropolitan government prerogative for urban renewal, county wide tax assessing and collecting, countywide zoning and planning, and many needed community developments. Dade citizens are hopeful that at last they have a Commission worthy of the problems it must solve.

Earl M. Starnes is 38 years old, a native of Winter Haven, a graduate of the University of Florida, cum laude, 1951, and a member of Phi Kappa Phi, an honorary society. He is married to Dorothy Jean Prather of Winter Haven and they have four children: Tom 10, Bill 8, Janet Maxwell 6, and Patricia Ann 2.

Besides his AIA-FAA interests, Earl has been Treasurer and Vice-President of the Miami Chapter of Construction Specifications Institute and is currently President of the Joint Co-operative Council of Florida, Inc. His civic activities include Meninak Club of Miami, its President in 1962 and its National Director, and Vice Chairman of City of Miami Operation Fix-up. He is a practicing architect in the firm Starnes, Reutscher & Associates, Coral Gables, Florida.



*The newest ideas in homes today begin with **natural gas**. Ideas that bring your customers the magic of “burner-with-a-brain” cook tops...the economy of water heaters that “think for themselves” ...and “worry-free” air conditioners that last the life of the mortgage. If this is enough to tickle your appetite, you can call your **natural gas utility company** and get a whole feast of new ideas to sparkle your sales appeal.*

FLORIDA
GAS
TRANSMISSION COMPANY

Shall We Continue To Sleep...

By ROY M. POOLEY, JR.

President
Florida Association of Architects



By one o'clock the stadium bound roads and bridges were choked with cars. A gaily dressed, festive throng streamed in merging rivers of color to the gates. With magnificent precision, a height of anticipation and the time of beginning melded into silence.

Crisply striped emerald turf, framed by the ovaled crowd, stood hushed and expectant under a brilliant clear sky as a lone light plane streamed its banner overhead.

Suddenly, with an explosive roar of thunderous approval, the 1963 Gator Bowl spectacle began to unfold its drama before the 50,000 avid football fans.

It was that kind of afternoon and through the usual following hours of revelry, more than 400 souls wearily found their way to rest in the Roosevelt Hotel. December 28th glided into the 29th. A wisp of smoke curled into the gray morning sky and blossomed into billowing clouds in a few short minutes. The raw quiet morning was suddenly alive in a fever of wailing sirens and panting trucks as a few heroic hotel employees raced from floor to floor and room to room. The first sleepy guests discovered their peril as the curious appeared in the streets from nowhere and everywhere.

At days final end, the nation's press, radio and television had told the stories of tragedy and heroism—the valiant efforts of fireman, navy helicopter pilots and hotel bellmen. A woman jumped eleven stories to her death and a fireman succumbed

to a heart attack, and twenty died from choking smoke.

As always, the real story, the significant truths, the lessons of value, were discovered by only the few professionals methodically searching for cause and effect. Frustrated men, knowing full well the lessons learned must be equated with political feasibility—but grateful too, that as so often before, *this tragedy will help protect others.*

Among significant facts exposed in the study of the Roosevelt Hotel fire were these:

The building was erected during the 1920's under a relatively strong and enforced building code, requiring fire resistive construction. Subsequent strengthening revisions in the code were not made generally applicable to existing buildings. The loss of 22 lives might well have been multiplied many times in a building of less fire resistant construction and the property loss could have easily been complete.

And, under the specific conditions encountered, application of only two provisions of the current City building code (as applicable to new construction) would almost certainly have prevented twenty of the twenty-two deaths suffered. (These provisions deal with building exits and closure of vertical shafts in multi-story buildings.)

Within days of the Roosevelt fire, the community received another shock. No lives were lost and the story received only limited coverage,

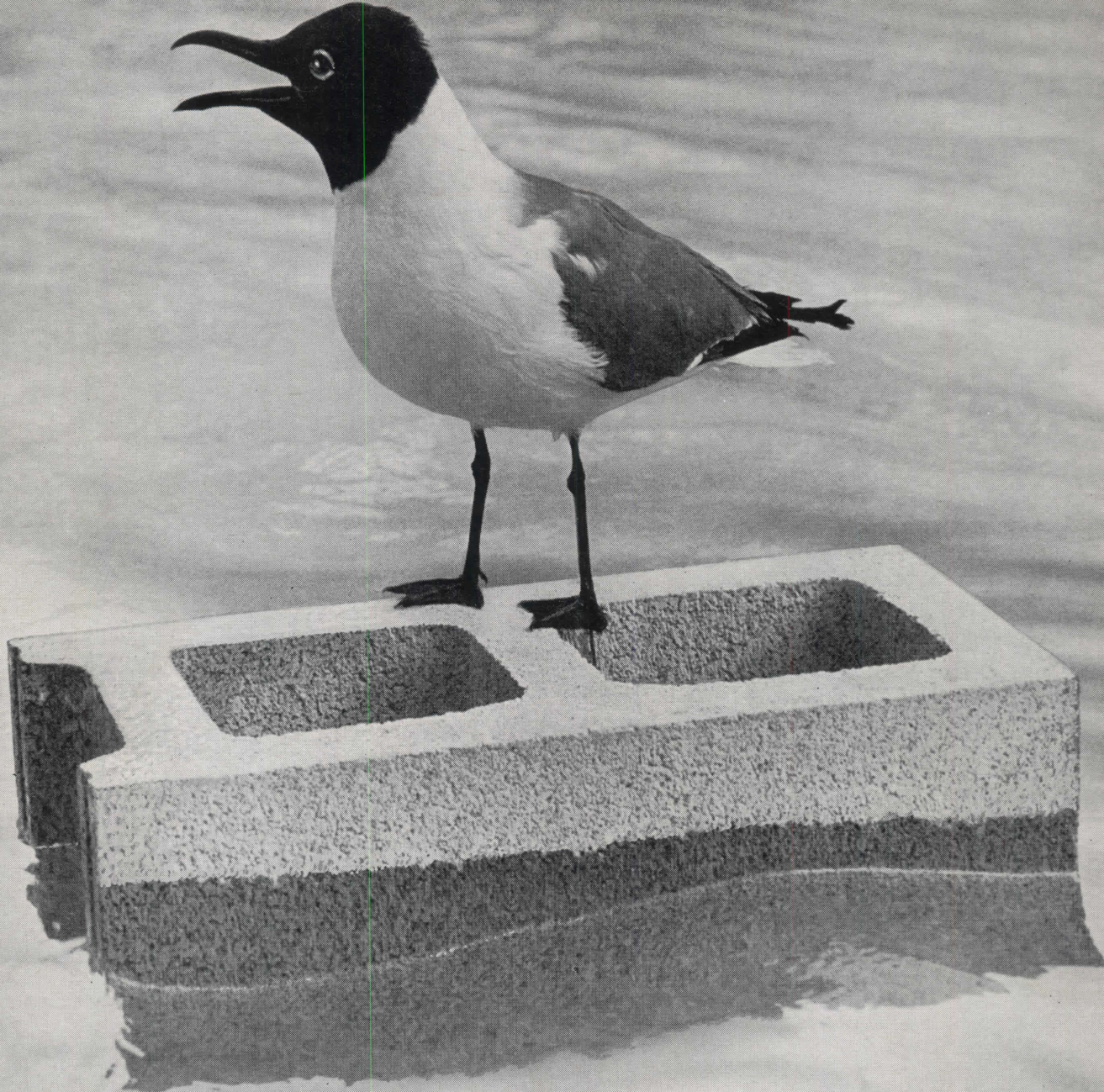
but to thousands of recent Christmas shoppers, news pictures of the huge (and spanking new) suburban department store, with its collapsed massive concrete roof beams, must have made a vivid, if queasy, impression!

To the professional architect, the impression had to be even more sickening. Only by accident of time and conditions was the damage limited to a partial roof failure without personal injuries. But imagine — just imagine torrential rains falling on those thousands of flat square feet of roof, married to high winds—and on Christmas Eve! It may well have stood without a quiver—but then again, maybe not.

Some facts in this case: *This building was constructed in 1963 in Duval County, outside the City limits of Jacksonville. Unlike the City, the County government does not have a general building code at all and to date does not even require the name of the designer for buildings erected in the County, regardless of size or use. A building permit is required to assure compliance with zoning regulations.*

Unfortunately, Duval's attitude is not unique. The State has recognized urgent necessity of competence by building designers, and requires stringent examinations by Architects and Engineers. State law prohibits practice of the design professions by the legally unqualified. Yet, more often than not, local communities and

(Continued on Page 27)



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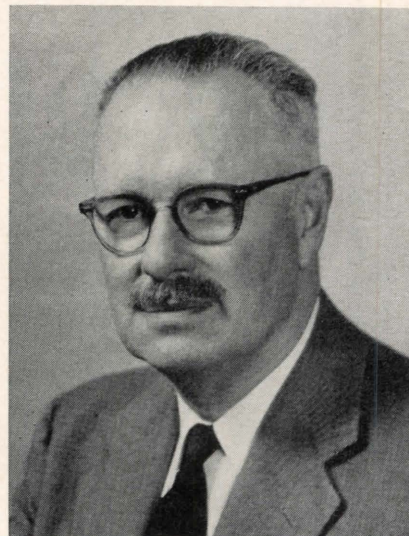
Lightweight Masonry Units and Structural Concrete

Sources and Resources for Architectural Design

By **PHILIP N. YOUTZ, FAIA, FRSA**

Dean of the College of Architecture & Design

The University of Michigan



Last year, The Department of Architecture, University of Florida conducted Seminars concerning Environment, Technology, and Architecture. THE FLORIDA ARCHITECT previously has published two papers presented at the Seminars by Mr. William Allen, Ariba and Mr. William Scheick, AIA. Dean Youtz, FAIA, FRSA, also participated in one of these. His address is published here.

The sources that influence an artist's creative work are often subtle and difficult to identify. Few designers would be able to analyze their own method of sketching and developing a special concept for a new building. Nor is it easy to say just what experiences stimulate creative thinking and which lack the power of suggestion. When pondering a design problem the mind is apt to explore a good many tempting byways that seem to have no conceivable bearing on the task at hand. Yet in the midst of this reverie an idea flashes into consciousness and we are started on our architectural design, invention, plan for a book, or musical composition. These contrasted pursuits seem to follow a similar process and to depend on an identical moment of illumination. All of the arts, visual, auditory and verbal appear to evoke parallel behavior.

It may be rewarding to point out some of the sources available to the modern designer in case he wishes to utilize them. It would be unwise to

attempt to limit the territory over which his imagination is permitted to rove, and so the ten categories which we will identify are chosen to guide our own discussion, not to set boundaries to his freedom of thought. All of the sources that will be suggested are provocative, all are modern in orientation, and all are intimately connected with architecture. The designer may repudiate most of them but there is a chance that one or two will strike the spark that we have mentioned as characteristic of the creative process. At least they may serve to broaden the architect's outlook and make him aware of the world in which he lives.

Cultural Background

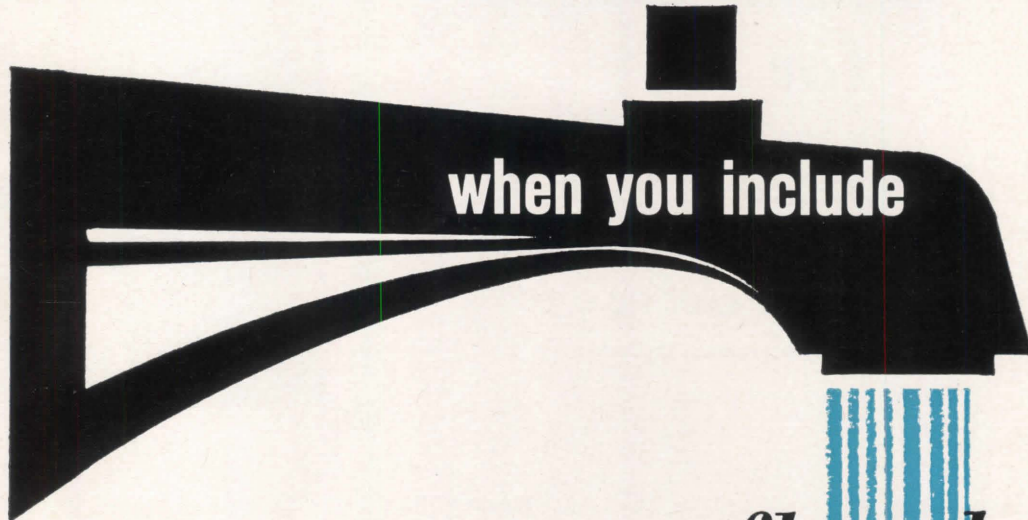
The first of these suggested sources for architectural design which deserves consideration is the architect's own *cultural background*. The designing artist is not an outlaw leading an adventurous life outside the jurisdiction of established society, but a true representative of his times. His work may defy all the rules laid down by the critics, but examination of his product will show that he cannot escape the viewpoint of his age. He belongs to a period and school however persistent are his efforts to escape. Were this not so he would not be able to communicate with his public. Art is never a private matter though some artists may rashly assert this claim. The arts are essentially a universal language of imagination and emotion.

The effect of *Freud's* writings has been to turn the attention of the architect, artist and designer inward to his own private life. The individual engaged in creative work makes a very important contribution to the aesthetic resources of his day. But when we study his accomplishment in the light of history, we find that he adds his gift of visual expression to a school or tradition which he develops or re-directs. The historical analysis of an artist's work does not lessen his stature as an original creative personality. Rather it reveals a genius as a man with the ability to absorb the artistic legacy of his time and to contribute richly to its growth. The artist's indebtedness to his social background exists whether, like *Picasso*, he leads a revolt, or whether, like *Manet*, he does not entirely abandon academic traditions.

Originality is not something starkly new and therefore unrelated to current cultural patterns, but rather a restatement and extension of existing resources. The creative mind makes use of certain sources that the artist believes will have continuing value for visual expression. A successful school informs the student of these cultural achievements so that he may choose those he wishes to preserve and those he desires to reject. The wise teacher of the visual arts does not tie the student to any set ritual of design. The history of architecture and civilization is presented as a path to the

(Continued on Page 16)

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- 4** Flameless electric water heaters cost less to buy, less to install, and are cheaper to operate, too. *Still more saving!*
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Architectural Design...

(Continued from Page 13)

present, not to the future. From this point where history ends and tomorrow begins, the student must advance boldly in his own initiative. If he is able to accept this challenge to move forward into the unknown, he has the essential qualification to become an architect or artist.

The cultural heritage from which the modern designer draws his inspiration is science civilization with its rapid expansion of knowledge, its new technology, its development of power industry and its discovery of atomic energy. To grasp the significance of this social revolution places unprecedented demands on the designer. He must abandon the precepts which guided him so well in handcraft culture and adopt a new code applicable to a scientific age. He must acquaint himself with the new philosophy of science and participate in the creation of a new cultural environment for man. The architect's job is to give form and beauty to this emergent scientific order. He can succeed in carrying out this difficult commission by promoting a closer alliance between science and art.

To accomplish this desirable goal, the designer needs to adopt a social, not a personal attitude toward his art. He must accept his responsibility for introducing harmony into the chaos of experimental new prototypes introduced by the applications of science. Hitherto the designer has too often been inwardly, not socially, oriented. He has taken too personal an attitude toward his work and failed to recognize that he had a duty to his community. The professional education of artists is comparatively recent in origin, so this *egocentric* outlook may be a sign of immaturity, which, hopefully, they will outgrow. Or it may be an *anachronism* carried over from Victorian hero worship.

That it is possible for the architect to take the leadership in designing the new science oriented world, is shown by some striking examples, *Canberra* in Australia, *Brasilia* in Brazil, and *Chandigarh* in India. These are bold attempts to mold nations by means of architecture. The success or failure of such projects must be judged not merely by aesthetic standards but also by political requirements. *Are these designs simply creations of famous architects, or do they embody the*

aspirations of three awakening nations? Does contemporary architecture represent individuals or people?

Architecture Redefined

The second source for architectural design is a new definition of architecture derived from anthropology. Before offering this for your consideration, it may be appropriate to run over some of the familiar past attempts to state the nature of buildings. Architecture has been described as *Fine Art*, as the expression of structure, as Space with a capital letter, to quote from Professor Bruno Zevi, as Visual History, to refer to a book I wrote, as a sequence of historic styles, and as a practical device for shelter. All of these attempts show insight, but they all seem to emit something essential. If *Fine Art* is used to denote a composition that has only secondary practical uses, I would not be able to accept it as an adequate synonym for architecture. Structure has always played a very important part in shaping architecture, but without aesthetic interpretation, it may be a dry bag of bones. *One of the important tools of the architect is the arrangement of space, two dimensional floor plans, three dimensional elevations and four dimensional traffic patterns which involve time sequences.* You will note that I have added a dimension to Professor Zevi's list. However, his definition leaves out structure, design and function. Architecture evolves in certain recognizable patterns which we classify as styles. These are interesting historically because they reveal origins. But style is only one attribute of architecture. Shelter is a primary function of all architecture but it is often the least significant feature. Responding to an irate client, Frank Lloyd Wright declared, "*Madame, all my buildings leak!*"

I would redefine architecture as one of the physical forms of culture. By culture I mean the accumulated knowledge, behavior patterns and aesthetic achievements of a given society at a particular place and period. Culture is a broad concept. It involves learning, activity and design. As an expression of culture, architecture performs a wide range of functions. It is not simply an object of beauty but it is also an income producing piece of real estate. Its structure may summarize the technical advances of its day, and its exterior may reveal the

visual aspects of a modern library or bank. Its interior may be an artificial environment which can be almost wholly controlled by its occupants.

But the point which deserves particular attention in the new definition of architecture is the part it plays in shaping, guiding and developing society. Buildings are active, not static, features of civilization. They are effective tools for social coordination. The basic function of architecture is not its practical utility but its role in accelerating the cultural process. Of course a distinction must be made between the monuments of dead civilization and buildings still serving a living society. Archaeological remains are now quiescent; in their day they too played an active part in human affairs.

The young architect needs to ponder this redefinition of architecture. He is not engaged in applying cosmetics to structural surfaces. He has not completed his job when he has provided the classroom space and amenities of a modern school. He is engaged in modeling the form of modern science oriented society. He is responsible for the dynamic effect of architecture on the community. Unless he grasps the opportunities of his profession in these large and long range terms, he had better take up automobile racing where he is more likely to injure himself than harm society.

Mathematics

The third source for architectural design is *mathematics*. This suggestion may surprise you, at least those of you accustomed to the more routine use of numbers. What I have in mind is not theoretical or applied mathematics, but fun with figures. A familiar example is Lewis Carroll's "*Alice in Wonderland*." A classic instance occurs in one of Plato's dialogues in which an uneducated slave is able to solve a problem in geometry by answering leading questions. Or you may read the monthly department on Mathematical Games conducted by Martin Gardiner in the *Scientific American*.

Apparently fun with figures has intrigued peoples all over the world since early times. Last winter I was reading Needham's *History of Science and Civilization in China*, Volume III, chapter 19, page 57, on mathematics. There I found charts of two

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Architectural Programming For Industrial Progress

PLANT
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The Florida Association of Architects will sponsor a Seminar on *Architectural Programming for Industrial Progress* on April 17th in conjunction with the Florida Industries Exposition in Orlando, Florida at the Exposition Park.

The three hour program, beginning at 9 A.M., will revolve around *Plant Planning for Profits*. A panel of three Architects and three industrialists will discuss important subject areas such as developing channels of communication between Industrialist and the Architect, the need to define responsi-

bilities of the Industrialist and the Architect in program development and program planning sequence for ultimate land use.

The panel will be moderated by Dr. Paul Douglass of Rollins College. The coordinator for this FAA project is John B. Langley, A.I.A. of Winter Park, Florida.

Those members of FAA who desire to exhibit their work will be permitted to do so in the meeting room. The specific designation of the meeting room will be announced at a later date.

FAA members should make plans to attend this important seminar as well as the Florida Industries Exposition, April 14-17.

The FAA Board of Directors will hold their second meeting of 1964 on Saturday April 18th at the Cherry-Plaza Hotel in Orlando.

Editor's Note: Complete details will be formulated during the next month and will be presented in the April Issue.

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Designed for Future Expansion, Too . . .

By LARRY REIS

This new building faces the north end of the Midway Shopping Center parking area and one block from a busy north-south thoroughfare which called for dramatic handling of the exterior. The parking facilities are at the rear of the building so that the rear elevation, in effect, is as important as the front elevation.

The requirement given the architect was for a building with ample office area for association use; at the same time, a community room, employees lounge, rest room, storage areas, plus sufficient second floor space for any foreseeable future expansion.

The building contains 8500 square feet on the first floor and 6500 upstairs. The exterior is composed of Florida keystone coral rock, glazed clay tile in a pleasant yellow bronze color and bronze tinted glass. The tile is applied with a non-staining epoxy grout. The vaulting on the exterior is a gel-coated fiber glass built up in the same way that fiber glass boats are built. It is thought that this was the first use of this method of construction in the architectural field.

On the inside a dome tile acoustical ceiling is used in conjunction with Parawedge light diffusers over the lobby area and Infinilite for the working area.

The fiber glass vaulting is carried to the interior for design continuity. The interior trim and panelling are ceylon teak while the vault facing is yellow bronze clay tile which is used again on the teller's counter, check writing desks and in the coupon booths. For the teller's stations Belgian black marble is used and the flooring at the teller's counters and foyers is Georgia travertine. The community room has an oak parquet floor.

Of special interest to those who visit the bank is the free standing terrazzo stairway reinforced by steel. This was conceived by the architect as a piece of working sculpture.

The interior colors are avocado green carpeting with pumpkin, turquoise blue, absinthe green and yellow used in fabrics and accents. The furniture is made of teak wood while the wall covering in the private offices and conference room is green and brown grass cloth with teak batten

trim. The walls in the open office area are vinyl in complimentary shades of green and gold.

The main floor includes the lobby, teller's area, work area with two drive-in windows and room for expansion, a vault, coupon booths, managers office, large storage areas, public and employees rest rooms, employees lounge, conference room and community room.

The community room is equipped with refrigerator, sink, coffee-making equipment and a motor-driven movie screen which recesses into the ceiling.

All wiring is run under the floor ducts. Heating and air conditioning is zoned for various work areas and private work offices. It is fed into the space from vents around light fixtures so that both heat and cooled air are from a non obvious source.

The vault has a special heating and air conditioning system installed so that the maximum security and fire safety aspects are not affected. Emergency air supply and telephone service also have been installed for the vault area.

Page eighteen . . . View looking North
Page nineteen . . . Above, showing customers lounge. Belief, view of free
standing terrazzo stairway
This page . . . Showing spacious lobby.





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Architectural Design...

(Continued from Page 16)

magic number diagrams which appear on a bronze incense burner which I bought in China many years ago and had never been able to decipher. The first was a magic square with three rows of three figures. Each row and each diagonal add up to the same sum, fifteen. The other was a magic cross. The even numbers and the odd ones in the arms of the cross both add up to twenty. The earliest text in which Needham finds a reference to these diagrams is dated about 80 A.D.

The Greeks enjoyed geometric games. The result was that they took a primitive wooden structure surrounded by log posts and developed it into the stone temple with all its complex modular relations and its added refinements. These latter were introduced in defiance of pure geometry in order to please the eye. When we gave up drawing the classic orders, we lost a lot of fun in tracing the geometry back of good proportion. The spacial relations in architecture all have a mathematical aspect. These ratios rationalize design decisions.

Unlike many of its sister arts, architecture requires very precise expression, first on paper, and then in materials. There is no place for vague ideas or impressions that have not yet crystallized. Drawings at small scale have to be developed full size. The supplier of components will detail shop drawings according to stock models, but anything different or original the draftsman must delineate.

A great deal of architectural thinking is geometrical or mathematical but the superior designer will not let numbers dominate him to the extent of numbing his personal sense of proportion. To ward against this I have suggested "*fun with figures*". It is a mistake to take mathematics too seriously. It is a powerful tool in many applications, far more potent than words, but it is well to remember that it is no more valid than its assumptions. Mathematical descriptions, whether of nature or of culture, are always abstractions that summarize but do not duplicate reality.

Playing with figures leaves the mind supple and relaxed. Equally important, it introduces one to quantitative thinking so that structural and mechanical calculations involve familiar entities and operations. Accuracy comes naturally if numbers are

acquaintances, not strangers. And if figures are associated with games or similar pleasurable activity, it is not likely one will "hate mathematics."

Actually the abacus and adding machine, the slide rule and electronic computer, have eliminated most of the drudgery in manipulating figures. These machines are the next step to applying automation to the brain. As fast as you can state the problem they produce the answer. They multiply the potency of human thinking many fold, accomplishing work in hours that might take a man, if he had the power of concentration, years.

I don't think we shall have trouble persuading the designers of the future that figures are fun because at long last there is a revolution taking place in the teaching of mathematics. Children delight in the classes and adults are horrified, which seems to indicate that the new instruction is successful. It presents the sacred categories of arithmetic, algebra, geometry, trigonometry, analytical geometry and calculus in a kind of smorgasbord that is said to be delectable. If this is so, the games which I have been suggesting may be played for fun without looking to any ulterior rewards.

Structure

The fourth source for architectural design is *structure*. My argument is needed to support this statement because architects generally subscribe to it. But the influence of structure today is vastly different from what it was before the turn of the century. Our new materials and modern engineering release the architect from his former limitations. Any building that lies within the range of economic feasibility now can be constructed. Almost any span that is likely to be needed can be achieved. Consequently a good deal of the adventure that attended erecting a building of unusual size or novel requirements has disappeared. The designer is free to undertake almost any type of structure he thinks suits his purpose. He is no longer challenged by the perplexities and uncertainties of an unknown architectural system. Today there are prototypes of almost any kind of building he can imagine.

The list of new systems of construction and newly introduced materials is short. Structural steel frames with wide flange long span components and connections made with high strength bolts or by welding, rein-

forced concrete frames, high strength concrete and high strength prestressed reinforcing, flat slab floor systems, reinforced concrete arches and domes, prefabricated concrete components, and, finally, thin shells, almost sum up the innovations. Recently welded box stiffeners have been used so that air conditioning ducts can pass through the webs of long span girders. The new materials are laminated wood, aluminum, plastics, especially for gaskets and flooring, panels of concrete with surfaces of attractive aggregates, fiber glass and other mineral insulation, and fireproof acoustic tile. The uses of glass have been greatly extended. Some success has been achieved with flexible plastic pipe. Perhaps we should add thin sawed panels of granite and marble for exterior walls but this use of stone veneer was known to the Romans. Many other modern materials might be cited but they are too familiar to stimulate the designer to work in new directions.

The structures which have inspired the imagination of architects all over the world are the precast domes and vaults of *Nervi*, the bold cantilevers of *Torroja*, and the thin shells of *Candela*. These men have used reinforced concrete in a daring and revolutionary way. Lift slab reduced buildings to their architectural essence, floors and columns, — thin horizontal planes floating on slender steel supports. As *Wright*, *Saarin*, *Yamasaki*, *Corbusier*, and *Niemeyer* discovered, concrete was the one material left which the designer could mold to his vision. *Miles van der Rohe* shaped his forms in naked steel. In all these examples we are impressed by the designer's ability to metamorphose familiar materials into structures that inspire wonder.

I have not mentioned suspended structures because they are still to an extent experimental. The *Cow Palace* designed and erected by *Nowiki*, *Dietrick* and *Severud* uses the strength of materials in ideal relationship, — concrete in compression and steel in tension. *Saarin*'s athletic building at *Yale* also exploits the physical characteristics of materials but, in this case, the long concrete arch seems a tour de force. Probably suspended structures will suggest more daydreams to the young designer than any of the orthodox manifestations of steel and concrete.

Physics

The fifth source for the designer of buildings is *physics*. Architecture is a science based profession. It draws on many disciplines including the social, biological and physical sciences. But as far as problems related to materials and structures and mechanical services are concerned, *physics supplies the theory which guides the architect in drawing up his working plans*. This science deals with *mechanics, properties of matter, sound, light, electricity, atomic physics, electronics, quantum optics, and nuclear physics*, to quote the table of contents of a recent textbook.

You would probably prefer to have me talk of the rough texture of ashlar masonry, the warmth of waxed wood, the crispness of wrought iron work, the rainbow tints of old fashioned glass, or the shadows cast by candle-light. This language reflects the values which the architect attaches to the materials with which he works. He is a hylozoist who believes that all matter is alive. His relation to brick and slate and tile is personal. He has an affection for materials that are our familiar surroundings and which protect us from the rain and snow.

If you are talking to a sympathetic client, this language of a handcraft period may charm him. But if he wishes you to erect a serviceable building, a home or office or institution, you had better be sure you know your applied physics. You may respect materials but if you want them to respect you, then learn how they behave. Actually most of the old craft practices in stone cutting and wood joinery are based on principles of science. In suggesting that physics is a good source for the designer, you are simply proposing that "sciences sense" be substituted for "common sense". Physics does not destroy the old values. It enables you to handle materials expertly.

The mechanical equipment of a modern building absorbs thirty or forty percent of the cost. The client expects the architect to understand how it works or, as is too often the case, why it fails in its magic. If the architect has to consult the manufacturer or the engineer, he not only loses face but he is neglecting his professional duty to his client. I am not suggesting that the architect become a mechanic or an engineer but

that he be knowledgeable about his total building. It is important that he knows the competitive advantages of the different mechanical products which he specifies and shows on his plans.

The market is full of new components and equipment. To the man well grounded in physics, it is an absorbing game to see how manufacturers meet the problems of lighting, acoustics, air conditioning and sanitation. A little connoisseurship yields as much entertainment and satisfaction as an engineer derives from an auto show. The love of gadgets develops early in the evolutionary line. My pet monkeys always preferred mechanical toys to food. The architectural esthete often fears mechanical things because he doesn't understand them. A good cure for this nervous condition is to read books on the history of invention. At the beginning stages nothing is very complicated. Once early principles are clear, it is easier to analyze contemporary developments.

Perhaps the most important reason of all for introducing architects to physics is that physicists are constantly working on new schemes and relationships. The mental processes involved in devising a fresh concept in architecture closely parallels the task of solving a scientific problem. Both scientist and architect should have highly fertile imaginations. And both need thorough training in their respective fields. In addition to this base for comradeship, the designer will find the discoveries which physicists are constantly making are fascinating reading. I prescribe the new cosmology to the harrassed architect.

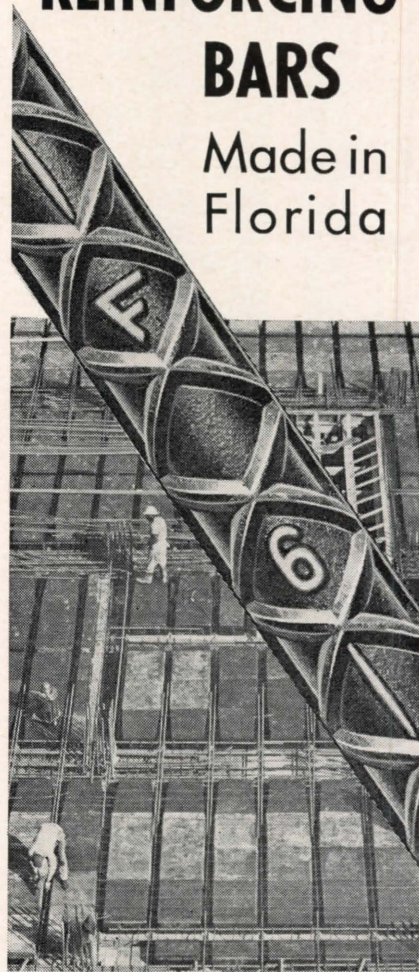
Fabrication and Site

The sixth source for designers is the strong tend toward *factory fabrication and site assembly*. This change has been going on at an accelerating pace since the turn of the century. One has only to turn the pages of Sweet's Catalogue to realize that the architect designed custom made building, fabricated by skilled craftsmen from raw materials, is becoming very rare. This technical change greatly alters the task of the designer. More time can be devoted to refinement of the plan and the outward expression of space and less hours expended on detailing and on coordinating the work of different trades.

(Continued on Page 24)

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Architectural Design...

(Continued from Page 23)

To date the architect has done very little about designing prefabricated components. Yet if he doesn't share in this task, his responsibility will soon be limited to assembly drawings for other people's designs. Standardization of window units and window panels speeds up erection and saves costs for the client. It also reduces drafting room time. But it diminishes the designer's control of the project. It makes architecture an impersonal factory product without the warmth and appeal of buildings that express the sensitivity of the designer.

Some offices are working out sets of similar units which can be modified in minor ways to adapt them to a succession of different buildings. These units thus become a trade mark of a particular office or architect, but unfortunately without the protection that registration is supposed to provide. Such special components are a halfway step toward uniformity. But the factory prefers completely standardized models that can be turned out by the millions and which are totally lacking in individuality.

The international style has been widely criticized because of the monotony of its shapes. But something very like a miracle has occurred. The organization of uniform windows throughout a building produces a new geometry that is perceived as a unit and is enjoyed by the observer. A little monotony is boring but more of it can produce order and harmony! Examples such as *Bunshaft's Lever Building*, *Mies's Seagram Building*, and *Pei's Municipal Art Center* in Montreal, all show the cumulative effect of repetition.

Without standardization, contemporary construction and design would be impossible. It is born of the machine age introduced by science. Personally, I find this new synthesis in architecture restful. Just to check on earlier impressions I recently strolled through City Hall park in New York to look at the Woolworth Building and then came up town and hunted up the Flat Iron Building which was the original skyscraper. The Woolworth Building had a certain unity but its eclectic appropriation of the Gothic style was unconvincing and false. The tortured surfaces of the prototype of all steel structures was amusing but inappropriate. It may be

of incidental interest to know that the engineer of the Flat Iron Building was a woman.

Prefabrication has produced much ugliness but gradually the designer is regulating and sensitizing its products. The new architecture is honest, strong and stark. These characteristics are those of our age. I think we have used too much glass in our passion for openness and light, but when our skyscraper greenhouses have weathered their first cyclone, no doubt we will be less insistent on transparent curtain walls. A few years ago a storm did blow out most of the glass from one floor in one of New York's tall buildings. For some reason not easy to explain the occupants and furnishings were not scattered in the streets at the same time.

My objection to the prefabricated house is that it is predesign. If the producer would build components and allow the architect to place the building on its site and introduce a variety of assemblies, we might attain something quite attractive. Years ago the Architectural School at Ann Arbor built a Youts Unit House and it proved not unattractive, perhaps because it was the only one of its kind!

City Planning

The seventh source for the architectural designer is *city planning*. *William Penn* laid out Philadelphia between the Schuylkill and the Delaware rivers. His foresight was shown by his pattern of five public squares, one in the center and four placed symmetrically around this. *Major L'Enfant* worked out the magnificent central mall of Washington and introduced diagonal avenues and traffic circles. A few other American cities such as Detroit started with ambitious plans but failed to carry them to completion. Most urban centers grew up haphazardly. They are monuments to free enterprise, real estate speculation, and public indifference.

But within the last few decades, nearly every urban community has developed a master plan and undertaken a program of urban renewal. This represents an expansion of architectural thinking. Instead of limiting design to a single building, the architect-planner thinks in terms of interrelated structures. He is concerned with the whole central core of a city, or an entire suburban satellite, or an entire campus, or with extended parkways. His design may embrace many square

miles. His drawings and models trace the visual and functional integration of metropolitan complexes that originally were a group of widely separated villages.

I still remember my excitement when the regional plan association was founded, or perhaps when it first came to my attention. The idea of bringing order and beauty and convenience to the spot where New York State, New Jersey, and Connecticut met struck me as inspiring but visionary. Through the years it seems to me little short of miraculous that so much of the plan has been realized. Slum conditions and congestion which reduced the value of property no doubt were a negative stimulus to this progress. But the accomplishment is also the result of imaginative designing. Architect-planners were able to show in drawings and models how the city could be transformed and far sighted civic leaders were able to carry out these proposals.

I think all architecture is social in its implications, the isolated building as well as the carefully planned interrelated community. But the architect-planner is probably the most socially conscious of any visual designer. His clients are corporate groups, not individuals. His studies show how people flow from their homes to their places of work, from restaurants to shops at noontime and from heavy traffic to open parks. The city is a stage across which passes a never ending stream of actors.

Urban planning has made phenomenal progress since the era of the city beautiful movement. In those days there were parks without people, inaccessible public buildings, highways that led nowhere and municipal statuary that was not sculpture in the aesthetic sense. The contemporary designer has learned that beauty and utility must be judiciously blended. Careful engineering and sensitive design are no longer considered incompatible. Ornament has ceased to be employed to conceal a lack of imagination.

The great lesson of planning for the designer is the opportunity to study and utilize large scale compositions. Too many architects think in terms of intimate design and fail to humanize their larger structures and their urban centers. Apparently it is harder to endow a Colossus with liv-

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News & Notes

New Registrations

Twenty-five more persons have been registered to practice Architecture in Florida. Of the total, 23 registrations were granted to residents of Florida. The remaining two were granted on the basis of the applicants having been already registered and practicing in another State.

Those passing the examination for registration are:

BROWARD COUNTY CHAPTER:

Richard E. Cole
Ernest N. Green
Robert E. Washington

FLORIDA CENTRAL CHAPTER:

Victor E. Brodeur
Richard A. Kimbrough
Donald G. Parish
Ralph E. Ricks

FLORIDA NORTH CHAPTER:

John P. Christoff

FLORIDA SOUTH CHAPTER:

Arthur Breakstone
Welmer C. Owens, Jr.
Arthur Perrin
Wilbert S. Schafer
Ronald H. Smith
Carson B. Wright

JACKSONVILLE CHAPTER:

Peter J. Aranco
Ronald J. Masters
Ted P. Pappas
James F. Price
George E. Shafer
Frank D. Shumer

PALM BEACH CHAPTER:

Donald J. Della Valle
O. D. Marvin
Joseph J. Palluga

The following were registered to practice in Florida from out-of-State:

OUT OF STATE:

Robert J. Cloud, Jr. — Perry, Ga.
James B. Tunc — Atlanta 5, Ga.

Peace Corp Architects

The Government of Tunisia has requested that the Peace Corps send 40 architects and city planners to assist in Tunisia's high priority housing program. Volunteers for the project will enter training in June. The American Institute of Architects will administer the program and provide "on the spot" technical advice and support. The AIA also will assist the

Volunteers in obtaining professional credit for their work.

Volunteer architects and city planners have been serving in Tunisia since the fall of 1962 and they are scheduled to return to the United States in the summer. Their significant contributions to the housing program caused the new request.

The Peace Corps Volunteers will be provided with office space and all the necessary supplies, equipment and transportation needed for the job. They will be used on a wide range of projects: town and city planning and the design of all types of structures from development housing to multi-story public buildings.

Because of the amount and variety of the projects under way, individual assignments can be made with reference to the special training or experience that the Peace Corps Volunteer might have. The Chief Engineer of the Housing Section has stressed that in no case will an architect or city planner be assigned to a job for which he is not properly prepared. There is such a demand for a wide range of skills that useful employment is assured.

Training for Peace Corps Volunteers will include a technical refresher and courses in the language and culture of Tunisia.

Peace Corps Volunteers receive an adequate cash allowance for food, clothing, housing, medical care and pocket expenses. They also accumulate \$75 a month which is payable on completion of service. Two years' service brings this amount to \$1800.

Applications should be submitted no later than April 1. They can be obtained by writing: Architects, Division of Recruiting, Peace Corps, Washington, D. C. 20525, or from your Post Office or the Peace Corps Liaison Office on college campuses.

Jr. College Conference

An estimated 125 persons recently attended the important Junior College Facilities Conference in Tampa, Florida. Of those in attendance, there were 41 Architects present. The Conference was sponsored by the School Facilities Council and the Florida State Department of Education.

The first Facilities Conference was held in 1959 and at that time the

Conference was directed at the problems involved in planning a new campus. Five years ago only five Junior Colleges were in permanent facilities.

Today, there are twenty-eight Junior Colleges with many of those which are in operation being in permanent facilities. Therefore, this second Conference explored the present relationship of curricular activities and attempted to describe the teaching methods of the next decade.

The State School Superintendent Thomas D. Bailey who gave the opening address at the Conference said the Junior College program would, in years to come, provide the majority of Florida's professional people.

"In the past seven years Florida spent \$22 million for Junior College Construction and soon would spend \$30 million more under the University Construction Bond Program," Bailey said.

We must all agree that the Architects of Florida have a major role ahead to ensure that the facilities will provide the exact educational services to its students. Certainly our descendants will judge us by our accomplishments.

Editor's Note: A late summer issue of THE FLORIDA ARCHITECT will provide special emphasis to the subject of Junior College Facilities.

AIA-PS Competition

Maintenance literature will rate a separate classification in the 1964 Building Products Literature Competition, sponsored by The American Institute of Architects and the Producers' Council.

Also to be given extra emphasis will be literature that gives recommended uses of the product and the limitation of use.

Both of these changes were recommended by the AIA-PC Liaison Committee and reflect the changing needs of today's architect.

Serving on the Jury of Awards will be: Dean D. Kenneth Sargent, FAIA, Syracuse University; LaVern J. Nelson, Detroit, Michigan; I. Lloyd Roark, Jr., FAIA, Kansas City, Missouri; Marcellus Wright, Jr., FAIA, Richmond, Virginia; R. Lloyd Snedaker, Salt Lake City, Utah; Edgar H.

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News & Notes

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Berners, FAIA, Green Bay, Wisconsin; and Lyle F. Boulware, Philadelphia, Pennsylvania.

Eligible for the Competition are all manufacturers of building products and equipment and associations of such manufacturers whose product literature is directed to the architect.

Entries are being received now and should be sent to the Publications Department, Producers' Council, 2029 K. Street, N.W. Washington, D.C. 20006.

Architectural Design...

(Continued from Page 24)

ing quality than a normal sized work of architecture. The reason so many large buildings are *vulgar* and *oppressing* is that they are miniature and insignificant forms blown up to skyscraper size.

Automation

The eighth source of inspiration for the designer is *automation* which now is being applied to modern architecture. Plumbing fixtures seem to have pioneered this trend by supplying hot and cold water. Today the temperature of rooms is governed by a well trained thermostat. Humidity may be similarly controlled. Light can be regulated to a given number of foot candles. Window louvers have been designed to open or close automatically so as to admit a uniform amount of sunlight. Elevators are now polite mechanical servants that move swiftly to their destinations without benefit of any human agent but the essential repairman. Outdoor doors spring open as deferentially as if for royalty. Some mechanical garages have been nearly successful.

If a building has a gymnasium, one may gallop on a mechanical horse or roll about on top of a pseudo camel. If one finds his girth too ample, there are mechanical masseurs which vibrate away excess weight. The female equivalent is a vibrating couch which reduces hips to slender lines. One may lunch,—I do not say dine,—at an automat. One rings up a friend for a chat and if he is out of town a recorded voice tells you so and the hour when he is expected back.

I mention this development because I think it has implications for the architectural designer. Buildings

are supplanting labor. This suggests that our profession is not engaged in apportioning space or modeling form or expressing the qualities of materials, but in specifying and installing a mechanical staff to wait on our clients and their guests. The new architecture must compete as service not as art. Man's aesthetic cravings can be supplied by television. If one is a bit lonely in this mechanical environment, he can turn on the radio and select a human voice.

Perhaps architects have been too inclined to view their work as one would a sculpture or a painting, as an object of aesthetic appreciation. It is somewhat of a wrench to find that people buy homes because of their dishwashing machines, clothes washers and dryers, not because they are beautiful and restful. Perhaps the designer should start thinking up a new set of values that will fit him for life in these United States.

I have injected automation into the discussion to highlight the need to shape architecture around the requirements and responses of people. Buildings are too often designed abstractly, as though they were a matter of individual taste or the development of some geometric system. Margaret Mead, during her talk before the American Institute of Architects at San Francisco, asked her audience why it was that architectural photographs and renderings so frequently showed buildings without people! In fact, this was, as I recall the theme of her speech.

I have had the experience of living in three houses which I planned and built myself. Actually this is a test which every architect should undergo. If you occupy one of your own buildings, you quickly learn a great deal about its faults and virtues. The experience creates a sympathetic attitude towards clients and their complaints.

In this connection I should like to see a confidential survey of the faults of representative current examples of architecture. I am sure that clients' comments would be more revealing than those of the most penetrating critics in architectural publications. No doubt most owners would subscribe to the dictum that good architecture should be oriented around people and that it should have all the mechanical services that the project can afford.

My conclusion is that automation is here to stay and that the designer should provide easy access for repairs and replacement on his working drawings. Far from destroying good architecture I think that automation helps pay the rent.

Transportation

The ninth source for the architectural designer is *transportation*. Buildings today must be linked with the network of communication which surrounds them. Pedestrian walks, automobile access and parking, bus lines, airports, railroad stations and helicopter landing places transform buildings into world ports. Modern man likes to commute from one continent to another. He is a confirmed globe trotter. His home is merely his point of departure. Modern travel is breeding a race of nomads.

Rather belatedly, architects now lay out parking spaces for buildings that stand on their own grounds. By dividing up these areas into small units, designers often succeed in relating them to the architectural scheme. If partially concealed by skillful planting the effect may be of a structure set within its own park. Occasionally the many colors of the cars add to the attraction of the composition. But the design of parking lots leaves much to be desired. Only a few designers have had the vision to develop this utilitarian feature into an interesting garden.

The worst examples of parking lots are the acres of black macadam that surround the shopping centers. These desert tracts are an eyesore. But they are not sufficiently repellent to keep customers from crowding these facilities to overflowing. Car accessibility is proving of prime importance in merchandising. Street parking is inadequate and the public patronizes the store with adjacent parking. But open areas for accommodating cars next to stores present a dismal prospect. The random alternation of parking lots and shops gives the community a ragged appearance. Thus far few designers have been able to meet this challenge brought about by the ever increasing number of automobiles.

Parking structures are expensive and too frequently require subsidies but the best of them show boldness in design and offer relief from congested streets. They present a real opportunity to the designer who will

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THE FLORIDA ARCHITECT

Continue To Sleep...

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county governments find it convenient to ignore and even aid in circumventing these state laws designed to protect the lives, property and investments of our citizens.

How utterly ridiculous can we be! *Must* we write the need in blood? Since when has the \$15.25 purchase of a "contractor's" license magically produced a structural engineer, a capable designer or an unbiased advisor? If knowledge, judgement and ability can be purchased so cheaply—why, oh why do we professionals spend a lifetime in their pursuit?

Florida needs, and needs desperately, to meet the challenge of physical growth realistically. More and more Architects and their supporting engineering specialists with ever increasing skills are essential. There must be some degree of competence in the art of building required for our builders.

Rigidly enforced statewide building and safety codes are vital if local authorities refuse to accept this responsibility.

And, it seems perfectly obvious that the Architectural profession must assume the leadership in attaining these standards—for the simple reason that **NO OTHER IS MORE QUALIFIED FOR THE JOB TO BE DONE.**

Miss America most likely doesn't realize that so dull a document as a building code probably saved her life, but there can be no question she is glad to be alive—and knows it! And surely there must be those who are grateful not to have been buried under the rubble of a roof collapse!

The question is—*was the alarm enough to awaken us? Or shall we sleep awhile yet?*

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Architectural Design...

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work within the framework of transportation engineering. As utilitarian buildings they must be laid out so as to be accessible during peak loads and they should present an orderly and inviting appearance to the customer. Nearly all of them need better natural or artificial light. Since the floor systems are commonly exposed, an imaginative designer can do a good deal to make the patterns of beams or flat slabs and columns expressive. Elevators for pedestrians safely located away from automobile traffic are essential for structures over two or three stories high. Careful study could, I am confident, transform these ugly amenities of modern life into architecture.

Another solution to car parking is to place it underground, under public squares, under streets and under buildings. This solution is based on the premise that cars not in use are unsightly and impede circulation so should be kept out of sight and out of the way. A good many fine old public squares have been ruined by turning them into subterranean parking facilities. The access car ramps and pedestrian stairs or escalators are neither functional nor beautiful. To save money most of the soil is removed and there is not enough left to provide for the root systems of large trees with the result that we have the anomaly of parks without shade, indeed with nothing but surface plants. I see no reason why a public square should not be designed as a hanging garden with many levels connected by open courts and reached by serpentine ramps.

Utility lines make under street parking impractical in many situations. Under-building parking can be developed most readily only when whole blocks are available. But it costs the owner a considerable investment to place two or three floors of parking under his store. He may be forced to do this to keep his customers, but unless he receives some form of subsidy from the city, this solution is costly. The idea of sub-basement parking is often feasible in new urban developments but it is very expensive when applied to existing structures. However, the progressive designer will explore every means of meeting the challenge of parking

which is an aspect of the larger one of linking architecture with transportation.

Research

The tenth and last source for the architectural designer is *research*. Every university today has the obligation to expand the intellectual horizon as well as to preserve and disseminate old knowledge. This orientation toward the future is new and is the product of the science revolution. Indeed one might say that the laboratory, not the library, is the focal center of modern thought. The library itself is more concerned today with world wide communication than in storing our cultural heritage.

Schools of architecture have caught the new spirit in their emphasis on contemporary design. But the pace of technological progress has been so swift that they have been content to leave to scientists and manufacturers the task of discovering new patterns of living and new components for construction. The faculties of our professional schools should be the leaders, not the followers, in this inquiry into the future. They should set about experimenting and testing the new architectural environment for the good life.

As a former director of research for the government, I must add a word of warning. Very few projects lead to any illumination or progress. Research requires imagination, focus, persistence, skill, initiative and luck. Without all of these ingredients men grow grey in the laboratory without achieving any significant result. Indeed they lose the will to break through the sound barrier of knowledge. Too often a teacher takes on a research job to add to an inadequate salary and searches earnestly for the needle in the haystack when previous studies have established the fact that there are no needles and no haystack in which they might be found. It is very difficult to distinguish between creative and routine research. Perhaps all that a director of research can do is to make sure that the man in charge of a project has the spirit of adventure and some familiarity with the field of his endeavors.

One of the great contributions of a research program is to acquaint an architectural faculty with the whole field of science, — *social, biological,*

and *physical*. Most of us have become so fascinated with the fair muse of space relations — I cannot identify her by name because the Greeks had no Muse of architecture — that we have neglected the other obligations of our profession. As I have tried to indicate throughout this paper, I don't think that art and science are incompatible. By way of illustration, *Muriel Rukeyser*, the poet, wrote the best biography of *Willard Gibbs*, one of our great American scientists, that has appeared in print. You will recall that *Gibbs'* equations demonstrated the relation between physics and chemistry in the days when these two sciences were studied as unrelated disciplines. It required a poet's insight to grasp the significance of this unification of knowledge.

As most architects are space men in the sense of being aware of four dimensional relationships, I think that we can be most effective in the field of research that involves prototype models. Every college of architecture should be engaged in constructing and testing an experimental structure. This undertaking should involve both students and faculty although in such a task it would be well to reinforce the working group with a scientist or two and with a few skilled mechanics from some one of the trades involved. Such a balanced personnel, which includes, designers, students, scientists and technicians, is well equipped to adopt an inventive to a research problem.

To conclude this paper, I believe that the architectural designer has vast sources and resources from which to develop the architecture of this atomic age. I hope he will not be content to function as a paper artist, guided only by aesthetic values, but will be invigorated by the strong currents of our total culture. The *Victorians* attempted to separate and rarefy art. They expressed this aim in the slogan, "*Art for Art's Sake.*" our task is to restore art to its function of humanizing all the processes of industrial civilization. Our slogan should be "*Art as a Way of Life.*" If we succeed in applying art to our total cultural environment, we can hopefully create a modern pattern of life that compares in quality and beauty with ancient Greek civilization, but which surpasses classic achievement in our growing understanding and control of nature.

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It's a hard, fine-grained sandstone from the now-dry bed of the Kiamichi River in Oklahoma. In color it ranges from a warm umber through a variety of brownish reds to warm, light tan . . . Face textures are just as varied. Over thousands of years rushing water has sculptured each individual stone with an infinite diversity of hollows, ridges, striations, swirls — and has worn each surface to a soft, mellow smoothness . . . The general character of this unusual stone suggests its use in broad, unbroken areas wherein rugged scale and rich color are dominating factors of design . . . Age and exposure can do nothing to this stone except enhance the mellow richness of its natural beauty. . .



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The Sanford W. Goin Architectural Scholarship Fund

As a special project to raise funds for the Sanford Goin Architectural Scholarship at the University of Florida, the women's auxiliary of the Florida Central Chapter, AIA, is undertaking a series of auctions-by-mail of original paintings by Florida artists.

To launch the project, six painters from the Clearwater area have donated three watercolors, two oils, and one black and white lithograph which will be sold to the highest bidders and all proceeds contributed to the scholarship fund.

For the next six months, starting with this issue, the Florida Architect will publish a photograph of one of the paintings each month, with details of its value, colors and size together with a brief sketch about the artist.

Minimum bids—to be determined by the market value of the painting—will be announced with each photograph. All bids should be sent to Mrs. Edmund MacCollin, 1480 Sunset Point Road, by the 20th of the month in which the picture appears. No checks should be sent until the winner is notified as soon after the monthly deadline as possible, but it is asked that a bank reference accompany each bid.



Gathering Storm

by

Ralph Hillbom

A realistic seascape done with the style and sensitivity that has made the artist one of the most popular marine painters in Ohio and Florida. He is the son of Henrik Hillbom, an outstanding New England landscape painter from the time of the first World War until his death in 1950.

Now director of the Florida Gulf Coast Art Center in Belleair, the young Hillbom was for 25 years director for B. F. Goodrich Company in Akron, Ohio. He also served on the board of Akron Art Institute for many years and is the only life-member of the Akron Art Society. In the late 1950s he helped organize and served as first president of the St. Augustine (Fla.) Art Association.

Born in Greenwich Village, where his father then had a home and studio, Hillbom was a member of the 1916 class at Yale University, where he majored in architecture. He spent six years in France — part of the time in military service with the American expeditionary forces and the remainder studying art. Since 1959 he has been a permanent resident of Florida. He was named art center director three years ago. His work is to be found in many homes in Ohio, Connecticut, California and Florida.

Framed in silver wood, the painting he has donated for the Sanford Goin Architectural Scholarship Fund is predominantly in shades of a stormy blue and lowering skies — blue-green water, white waves and purpling-grey clouds. Its frame size is 31 1/2 by 25 1/4 inches.

Valued at \$200, minimum bids will start at \$125.

Deadline for entries in bidding is March 20 and all bids should be mailed before that date to Mrs. Edmund MacCollin, 1480 Sunset Point Road, Clearwater, Florida. It is asked that a bank reference be included with each bid but no checks are to be sent until the winner is notified. This will be as soon after the closing date as possible.